

# Piwo świąteczne - Christmas Ale

- Gravity **16.2 BLG**
- ABV ---
- IBU **50**
- SRM **29.5**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss --- **liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size --- **liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.2 liter(s)**
- Total mash volume **27.2 liter(s)**

## Steps

- Temp **53 C**, Time **15 min**
- Temp **68 C**, Time **55 min**

## Mash step by step

- Heat up **21.2 liter(s)** of strike water to **57.7C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **55 min** at **68C**
- Sparge using **-15.2 liter(s)** of **76C** water

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (66.1%)	79 %	6
Grain	Strzegom Monachijski typ I	1 kg (16.5%)	79 %	16
Grain	Fawcett - Crystal	0.5 kg (8.3%)	70 %	160
Grain	Briess - 2 Row Carapils Malt	0.25 kg (4.1%)	75 %	3
Grain	Strzegom Czekoladowy jasny	0.15 kg (2.5%)	68 %	400
Grain	Carafa III	0.15 kg (2.5%)	70 %	1034

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Columbus/Tomahawk/Zeus	12 g	60 min	15 %
Boil	Columbus/Tomahawk/Zeus	15 g	20 min	15 %
Boil	Willamette	15 g	10 min	5 %
Boil	Willamette	10 g	5 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Fermentis Safale US-05	Ale	Dry	11.5 g	---
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### Extras

Type	Name	Amount	Use for	Time
Spice	imbir	30 g	Boil	60 min
Spice	cynamon	30 g	Boil	10 min
Spice	gałka muskatołowa	5 g	Boil	10 min
Spice	anyż	7.5 g	Boil	10 min
Spice	goździki	5 g	Boil	10 min
Spice	kardamon	5 g	Boil	10 min
Other	skórka z 2 pomarańczy	0 g	Boil	10 min
Other	skórka z 1 cytryny	0 g	Boil	10 min
Flavor	miód gryczany	700 g	Boil	10 min
Fining	mech irlandzki	5 g	Boil	15 min